

# CNF 2019-2020 Research Accomplishments

## INDEX

### Reports by CNF Project Number

111-80.....	126, 128	2509-16.....	42
386-90.....	60	2514-16.....	160
598-96.....	130	2524-17.....	110, 112, 114
692-98.....	2	2525-17.....	116
731-98.....	4	2527-17.....	118
863-00.....	36	2543-17.....	44
900-00.....	80, 92, 132	2575-17.....	174
1314-05.....	134	2578-17.....	46
1400-05.....	62	2584-17.....	72
1645-08.....	64, 170	2590-17.....	20
1735-08.....	136	2619-17.....	22
1738-08.....	6	2633-18.....	162
1757-09.....	66	2661-18.....	120
1936-10.....	38	2684-18.....	74
1970-10.....	8	2706-18.....	24
1997-11.....	94, 96	2727-18.....	26
2068-11.....	10	2733-18.....	40
2091-11... ..	138, 140, 142, 144, 146	2751-18.....	76
2123-12.....	82	2754-18.....	28
2125-12.....	148	2767-19.....	164
2126-12... ..	84, 150, 152, 154, 156	2779-19.....	166
2157-12.....	12	2780-19.....	30
2217-13.....	172	2790-19.....	168
2262-13.....	14	2800-19.....	48, 50, 52, 54, 176
2364-15.....	98	2801-19.....	124
2385-15.....	86, 88	2802-19.....	178
2416-16.....	90	2803-19.....	56
2444-16.....	158	2806-19.....	32
2458-16.....	100	2833-19.....	34
2471-16.....	102	2847-19.....	58
2472-16... ..	16, 104, 106, 108, 122	2858-19.....	68
2486-16.....	68	CNF Fellows Program .....	78
2504-16.....	18	CNF Staff.....	180
2505-16.....	70		

### CNF Principal Investigators & Users

#### A

Abe, Mahiro.....	100
Alden, Jonathan S.....	68
Alden, Joshua S.....	68

#### B

Bader, Samuel James.....	48, 50
Bagheri, Morteza.....	164
Balazs, Daniel M.....	170
Ballard, Andrew.....	136
Bharadwaj, Shyam.....	124
Bidon, Miya.....	174
Bircan, Baris.....	80, 90
Bosch, Melissa.....	104, 108
Boucher, Michael.....	148
Buhrman, Robert A.....	126, 128, 158
Butcher, Jonathan.....	22

#### C

Capasso, Federico.....	102
Cardenas, Jaime.....	110, 112, 114
Casamento, Joseph.....	56
Cham, Thow Min.....	130
Chaudhuri, Reet.....	48, 50
Chen, Huiyao.....	150
Chen, Jingyi.....	30
Cheung, Hil Fung Harry.....	152
Cohen, Itai.....	80, 90
Cohn, Rachael.....	36
Cortese, Alejandro J.....	46, 92
Cothard, Nicholas.....	100
Craighead, Harold G.....	4
Crouse, David.....	118

<b>D</b>		<b>H</b>		<b>K</b>	
Daniel, Susan . . . . .	174	Hanrath, Tobias . . . . .	64, 170	Kaefer, Florian Hermann Ulrich . .40	
Daveau, Raphael Sura . . . . .	154	Hanson, Maureen R. . . . .	20	Kandula, Varshith. . . . .	140
DeBenedetti, William J.I. . . . .	72	Harper, Christine E. . . . .	8	Kang, Minjee . . . . .	24
Deng, Jingyuan . . . . .	76	He, Yang . . . . .	96	Khilwani, Devesh . . . . .	46
Dodge, Kenneth . . . . .	134	Hernandez, Christopher J. . . . .	8	Kirby, Brian. . . . .	86, 88
Dorsey, Kyle J. . . . .	78, 80	Hickman, Austin . . . . .	50, 54	Ku, Jaseung. . . . .	134
<b>E</b>		Hines, Melissa A. . . . .	72	Kuan, Johnathan . . . . .	150
Encomendero, Jimmy . . . . .	124	Hong, Yifeng . . . . .	6	Kymissis, Ioannis (John). . . . .	172
Erkan, N. Deniz. . . . .	170	Howington, Caleb. . . . .	136	<b>L</b>	
Esmaili, Ehsan . . . . .	26	Huang, Jen-Yu. . . . .	64	Lee, Hyunjea . . . . .	56
Esposito, Edward . . . . .	80	Huang, Steven He . . . . .	16, 104	Lee, Junsung . . . . .	8
Estroff, Lara. . . . .	24	Huang, Yuming . . . . .	66	Lee, Kevin. . . . .	124
<b>F</b>		Hwang, James C.M. . . . .	42	Lee, Sunwoo . . . . .	46
Fuchs, Gregory D. . . . .		<b>I</b>		Leifer, Cynthia . . . . .	30
84, 138, 140, 142, 144,		Iaia, Vito. . . . .	136	Lepak, Lori . . . . .	120
146, 150, 152, 154, 156		Indrajeet. . . . .	136	Li, Jiaruo . . . . .	16
<b>G</b>		<b>J</b>		Li, Lei . . . . .	42, 50, 54
Garza, Tanya Cruz . . . . .	172	Jadhav, Vivek Sitaram . . . . .	4	Li, Mingxiao . . . . .	96
Genova, Vince . . . . .	78	Jarjour, Alexander . . . . .	160	Li, Wenshen. . . . .	52
Giloteaux, Ludovic . . . . .	20	Javid, Usman A. . . . .	94	Liepe, Matthias. . . . .	166
Gingerich, Marcus . . . . .	18	Jena, Debdeep . . . . .	48, 50, 54, 56, 124, 176	Lin, Qiang. . . . .	94, 96
Granados-Baez, Marissa. . . . .	110	Ji, Xingchen. . . . .	98	Ling, Jingwei . . . . .	96
Gray, Isaiah . . . . .	138	Ji, Yanxin. . . . .	92	Lipson, Michal. . . . .	98
Gu, Huan . . . . .	70	Jiang, Shengwei . . . . .	162	Lisham, David . . . . .	78
Guo, Chunlei . . . . .	116	Jiang, Yingchun . . . . .	164	Liu, Fangchen. . . . .	14
Gupta, Manish . . . . .	82	Jung, Minwoo. . . . .	122	Liu, Qianbiao. . . . .	126
		Jung, Sunghwan . . . . .	26	Liu, Qingkun . . . . .	90
				Liu, Yebin . . . . .	134
				Long, Emma . . . . .	52, 178
				Luo, Jialun. . . . .	156
				Luo, Tao . . . . .	10

**The 2019-2020 Cornell NanoScale Facility  
Research Accomplishments  
are online in PDF,  
[http://cnf.cornell.edu/publications/research\\_accomplishments](http://cnf.cornell.edu/publications/research_accomplishments)**

## M

Ma, Zhen ..... 32  
Mahalanabish, Aditya ..... 122  
Mak, Kin Fai ..... 162  
Marohn, John A. .... 36, 148  
Maroo, Shalabh C. .... 82  
Mathur, Nikhil ..... 84  
McEuen, Paul L. .... 80, 90, 92, 132  
McEwen, Benjamin..... 74  
Miller, Jeffrey..... 176  
Miller, Paula ..... 4  
Mirbagheri, Golsa..... 118  
Molnar, Alyosha C. .... 46, 58  
Moreau, David..... 12  
Muller, David A. .... 142

## N

Nauriyal, Juniyaali ..... 112  
Nomoto, Kazuki ..... 48, 50, 52, 54  
Norris, Samantha L..... 132  
Nowack, Katja C. .... 160, 168

## O

Ober, Christopher Kemper  
..... 40, 60, 66, 76  
Oh, Justin ..... 168  
Otsubo, Yusuke. .... 60

## P

Page, Ryan. .... 124  
Park, Albert M. .... 142  
Park, Jisung..... 44  
Park, Joon-Suh..... 102  
Pearson, Tanner..... 80  
Petersen, Poul B..... 38  
Plourde, Britton L.T. .... 134, 136  
Plumridge, Alex ..... 2  
Polhemus, Katherine ..... 86  
Pollack, Lois ..... 2  
Poudel, Sajag..... 82  
Putnam, David..... 34

## Q

Quien, Michelle ..... 170

## R

Radzio, Julia. .... 88  
Ralph, Daniel..... 130  
Ravirajan, Abhaiguru..... 76  
Ren, Dacheng. .... 70  
Reynolds, Michael F. .... 90, 132  
Rivera-De Jesús, Mariela ..... 34  
Roberts, Melanie F..... 8  
Russell, Sierra ..... 80

## S

Sanders, Stephanie..... 38  
Saraswat, Devansh ..... 52  
Sartorello, Giovanni ..... 106  
Schaefer, Brian T. .... 168  
Schiffres, Scott..... 164  
Schlom, Darrell G. .... 44, 138  
Scuderi, Gaetano ..... 22  
Senatore, Michael..... 134  
Shahedipour-Sandvik, Fatemeh .. 74  
Shan, Jie ..... 162  
Shcherbakov, Maxim Radikovich  
..... 104, 106, 108  
Shen, Po-Ting. .... 16  
Shilkin, Daniil ..... 108  
Shire, Douglas ..... 18  
Shuler, Michael L..... 4  
Shvets, Gennady  
..... 16, 104, 106, 108, 122  
Singhal, Jashan. .... 56  
Smart, Conrad ..... 92  
Song, Meiting. .... 112, 114  
Stacey, Gordon..... 100  
Sun, Peter..... 36  
Sun, Rita..... 62  
Sun, Zeming. .... 166  
Szoka, Edward..... 58

## T

Tang, Tiffany ..... 174  
Tapping, Ryan ..... 128  
Thorne, Robert..... 12  
Tran, Hai..... 66

## V

van Dover, R. Bruce..... 62  
Vandekerckhove, Tom Arno F... 154

## W

Wan, Christopher ..... 30  
Wang, Chenyan. .... 32  
Wang, Michelle D..... 6  
Wang, Wei. .... 90  
Wang, Yadong ..... 28  
Wang, Ying ..... 4  
Wei, Ran..... 116  
Windsor, Aaron ..... 180  
Wong, Patricia..... 18  
Wright, John ..... 56  
Wu, Mingming..... 10, 14

## X

Xie, Yanyou ..... 144  
Xing, Huili Grace  
.. 48, 50, 52, 54, 56, 176, 178  
Xiong, Kuanchen. .... 42

## Y

Ye, Fan ..... 6  
Yeh, Chia-Wei..... 28

## Z

Zhang, Chi ..... 146  
Zhang, Jihua. .... 116  
Zhang, Zexuan ..... 56  
Zhu, Lijun ..... 158  
Zou, An ..... 82  
Zou, Bugao ..... 100